



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/695,692

10/29/2003

Leszek A. Wojcik

A303

5071

7590

10/14/2004

Carl C. Kling
6 Skyline Drive
Hawthorne, NY 10532

EXAMINER

FULLER, RODNEY EVAN

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,692

Applicant(s)

WOJCIK

Examiner

Rodney E Fuller

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

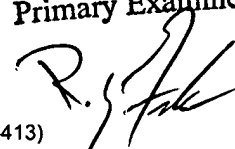
- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Rodney Fuller
Primary Examiner

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following items:
 - a. There is a typographical error on page 6, line 19 of the specification: “i9maged”.
 - b. There is a typographical error on page 6, line 25: “polate 7 ..”.
 - c. Reference 5 in Figure 1 is listed as a “yaw vacuum diffuser bracket.” However, there is no description in the specification related to the feature. Further, there appears to be no relationship in the drawings relating the “yaw vacuum diffuser bracket” (ref.# 5) with the “yaw shaft” (ref.# 8).
 - d. Reference #4 (yaw bracket), #5 (yaw vacuum diffuser bracket), #6 (x preload spring bracket), # 10 (x preload spring assembly), #15 (clamp), and #16 (post) are listed as a part in the specification and shown in the drawings. However, there is no detailed description of how these components are related to the overall apparatus.

Appropriate correction is required.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following items must be shown or the feature(s) canceled from the claim(s):
 - i. (claim 1, lines 2, 25): “high resolution stage”
 - ii. (claim 1, lines 12, 14): “central yaw shaft opening”
 - iii. (claim 1, line 13): “vacuum channel”
 - iv. (claim 1, lines 18-19): “peripheral channel”

Art Unit: 2851

- v. (claim 5, line 2), (claim 6, line 2), (claim 7, line 2): “x and y pre-load means”
- vi. (claim 7, line 6): “vacuum channel means juxtaposed with said yaw shaft”
- vii. (claim 8, lines 7-8): “peripheral channel”
- viii. (claim 8, line 8): “epoxy cement”
- ix. (claim 8, line 13): “a high flatness rigid plate”

3. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claim 2 recites the limitation "said top plane" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 1 states "...with support islands and peripheral channel having a depth appropriate for holding a vacuum diffuser plate flush with said support plane." From figure 3, it is clear that the support islands are positioned on top of the support plane. Thus, it is unclear how the "vacuum diffuser plate" can be "flush with said support plane," since there will be a gap between the diffuser plate and the support plane.

8. Claims 2-6 depend from claim 1 and therefore include the deficiencies of claim 1.

9. Claim 8, states "...vacuum diffuser plate co-planer with the top plane of a substrate support x-bracket." As noted above, from figure 3, it is unclear how the diffuser plate can be co-planner with the top of the substrate bracket.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Hunter (US 6,756,751).

As best the examiner can ascertain the claimed invention, Hunter discloses all the structure set forth in the claim. Hunter discloses a x-y-theta chuck (column 1, lines 50-51) for mounting to a vacuum equipped platform (column 1, lines 35-36) of a high resolution stage for multi-exposure projection lithography (column 1, lines 13-17) on a substrate which includes an x, y and yaw mount and adjusting means (column 1, lines 50-51) and a vacuum system that includes a diffuser plate (column 3, line 3), support islands and a peripheral channel (column 1, lines 28-33). Likewise, Hunter discloses all the structure set forth in claims 2-8.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Tsukamoto, et al. (US 6,762,826), Zemel (US 6,483,574), Kubo (US 2003/0098962), Trost (US 2002/0154839), Sawai, et al. (US 2001/0019229), Novak, et al. (6,363,809) and Waskiewicz, et al. (US 6,324,933) each disclose an x-y-theta chuck / stage with a vacuum equipped movable platform.

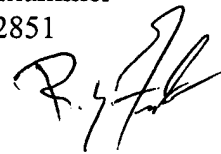
Art Unit: 2851

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney E Fuller whose telephone number is 571-272-2118. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rodney E Fuller
Primary Examiner
Art Unit 2851



October 12, 2004